

CLAIMS

1. A system for displaying a user interface for a telematics client, comprising:
a display panel configured to display image data;
5 a graphics processor in communication with the display panel;
a draw manager in communication with the graphics card; and
an application buffer in communication with the draw manager, the application
buffer configured to receive the image data from an application, the application buffer
further configured to transmit the image data to the draw manager at a first rate, wherein
10 the draw manager is configured to determine a rate of updating an object of the display
image through manipulation of the image data received from the application buffer.
2. The system of claim 1, wherein the draw manager manipulates the image
data received from the application buffer through interpolation of sequential image data.
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3. The system of claim 1, wherein the draw manager includes a memory
module and draw manager logic.
4. The system of claim 1, wherein the first rate is faster than the rate of
20 updating an object of the display image.

5. The system of claim 1, wherein the draw manager is configured to selectively optimize the rate of updating the object based upon an operating system type and the graphics processor.

5 6. The system of claim 1, further comprising:

a user interface manager enabling a windowing environment for the application, where the application occupies an entire viewable area of a display screen without alerting other applications whether the other applications have lost or gained focus.

10 7. The system of claim 6, wherein the user interface manager includes,

logic for writing application data from a plurality of applications to corresponding application buffers;

logic for enabling a first one of a plurality of application buffers to write data to the draw manger;

15 logic for displaying user interface data within the entire viewable area of the display panel from the draw manager; and

logic for switching from a first one of the plurality of application buffers writing data to the draw manager to a second one of the plurality of application buffers while each of the plurality of applications continues to write application data to corresponding
20 application buffers.

8. The user interface manager of claim 7, wherein each logic element is one of or a combination of hardware and software.

9. A draw manager configured to optimize updating of a display being presented, comprising:

a memory module for receiving image data from an application buffer;

logic for transmitting the image data for display;

logic for determining an update time period for the image data being displayed;

and

logic for transmitting updated image data for display according to the update time period.

10. The draw manager of claim 9, wherein each logic element is one of or a combination of hardware and software.

11. The draw manager of claim 9, wherein the logic for determining an update time period for the image data being displayed includes,

logic for capturing the updated image data upon the expiration of successive update time periods.

12. The draw manager of claim 11, further comprising:

logic for manipulating the captured updated image data prior to presentation, the logic for manipulating being configured to perform interpolation between values associated with previous image data and values associated with the captured updated image data.

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13. The draw manager of claim 9, wherein the draw manager is a component of a telematics system incorporated into a vehicle.

14. A method for providing efficient updates for a display screen associated with a telematics system, comprising:

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writing data to an application buffer at a first rate;

writing the data from the application buffer to a draw manager;

determining a second rate for updating a display presented on the display screen, the second rate being a less frequent rate than the first rate;

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defining updated image data, the defining including,

performing an interpolation between values associated with most recent image data of the draw manager and values associated with previous image data of the draw manager; and

updating the display presented on the display screen with the updated image data.

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15. The method of claim 14, wherein the draw manager includes a system buffer.

16. The method of claim 15, wherein a plurality of application buffers are capable of writing to the system buffer.

5 17. The method of claim 14, wherein the method operation of determining a second rate for updating a display presented on the display screen includes, optimizing the second rate based upon an operating system type and a graphics processor type.

10 18. The method of claim 14, further comprising: continually writing data to the application buffer when the data from the application buffer is not being presented on the display screen.

15 19. The method of claim 14, wherein the method operation of writing the data from the application buffer to a draw manager includes, selecting the application buffer from a plurality of application buffers, wherein each of the application buffers receiving data from a corresponding application, each corresponding application performing as if data from each corresponding application has focus of the display screen.

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20. The method of claim 14, further comprising:

repeating the defining of the updated image data; and

repeating the updating of the display with the updated image data.